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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,830

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Koichi Sakita

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12/29/2005

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EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,830

Applicant(s)

SAKITA, KOICHI

Examiner

Minh D A

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/19/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 16 is/are allowed.
- 6) ☒ Claim(s) 5-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 5-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Takamori et al (US 6,867,552).

Regarding claim 5, Takamori discloses a method and apparatus for driving plasma display panel using selective writing and selective erasure including a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the plurality of Y electrodes, and a plurality of a electrodes crossing the X and Y electrodes, the method providing a recurring cycle of an initializing period, an addressing period, and a sustaining period, the method comprising: applying a ramp waveform in the initializing period, applying a sustaining pulse applied in the sustaining

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period to each of the X electrodes and the Y electrodes includes an alternating pulse oscillating between both sides of a predetermined reference voltage at least in the beginning portion of the sustaining period and a pulse of positive voltage based on the reference potential at the end of the sustaining period. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 6, Takamori discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the plurality of Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (See figures 1, 5,7,16-17, the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the sustaining period includes a constant voltage waveform of negative voltage based on a predetermined reference potential, which is applied at least at the end of the sustaining period. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 7, Takamori discloses wherein the waveform applied to the address electrodes is a constant voltage waveform of negative voltage based on the predetermined reference potential, which is applied during the entire sustaining period. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 8, Takamori discloses wherein the waveform applied to the address electrodes includes a constant voltage waveform set at the level of the predetermined reference potential at least in the beginning portion of the sustaining

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period and a constant voltage waveform of negative voltage based on the reference potential, which is applied at the end of the sustaining period. See figures 1-19.

Regarding claim 9, Takamori discloses the reference potential is regarded as at a ground level, and a sustaining pulse applied to each of the X electrodes and the Y electrodes in the sustaining period is an alternating pulse oscillating between both sides of the ground level. See figures 1-19

Regarding claim 10, Takamori discloses wherein the reference potential is regarded as at a ground level, and a sustaining pulse applied to each of the X electrodes and the Y electrodes in the sustaining period is an alternating pulse of positive voltage based on the ground level. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 11, Takamori discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (figure 13), the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the sustaining period includes a constant voltage waveform of positive voltage based on a predetermined reference potential at least in the beginning portion of the sustaining period and a constant voltage waveform at the level of the reference potential at the end of the sustaining period. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 12, Takamori discloses a method of driving a plasma display panel including a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes, the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the initializing period includes a constant voltage waveform of positive voltage based on a predetermined reference potential at the end of the initializing period. See figures 1-19, col.8, lines 20-67 to col.15, lines 1-62.

Regarding claim 13, Takamori discloses that, the ramp waveform applied to at least one type of the X electrodes and the Y electrodes includes a first ramp wave having a positive ramp and a second ramp wave having a negative ramp. See col.2, lines 34-67 to col.3, lines 1-36.

Regarding claim 14, Takamori discloses that, the initializing period, a waveform including the first ramp wave and the second ramp wave is applied to the Y electrodes, and a constant voltage of opposite polarity X corresponding to the first ramp wave and the second ramp wave is applied to the X electrodes. See figures 1-19.

Regarding claim 15, Takamori discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (13), the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing

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period, wherein at least one of a voltage between the address electrodes and the Y electrodes at the end of the initializing period, a voltage between the X electrodes and the Y electrodes at the end of the initializing period, and an offset voltage of a voltage applied between the address electrodes and the Y electrodes at the end of the sustaining period is set at a predetermined level, and two types of discharges including a discharge between the X electrodes and the Y electrodes and a discharge between the address electrodes and the Y electrodes are caused at the end of the initializing period. See figures 1-19,col.8, lines 20-67 to col.15, lines 1-62.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Allowable Subject Matter

3. Claims 1-4, and 16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, the voltage of a driving waveform for each electrode satisfies the following relational expression: $2V_{TAY} - V_{TX} \leq 2V_{AY} - V_{XY} - 2V_{AOFF}$; wherein V_{TAY} denotes a discharge starting threshold voltage between the address electrodes and Y electrodes, and V_{TX} denotes a discharge starting threshold voltage between the X electrodes and Y electrodes, respectively, when the Y electrodes serve as cathodes, wherein V_{AY} denotes a voltage applied between the address electrodes and the Y electrodes, and V_{XY} denotes a voltage applied between the X electrodes and the Y electrodes, respectively, at the trailing edge of the ramp waveform at the end of the initializing period, and wherein V_{AOFF} denotes an offset voltage of the voltage applied between the address electrodes and Y electrodes at the end of sustaining period recited in independent claims 1 and 16.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hibino et al (US 6,738,033) and Okada.(US 6,476,561) are cited to show a display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

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If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Primary Examiner


Examiner

Minh A

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12/22/05